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Cooperative Flax Trials

in the Spring Flax Region—1982



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COOPERATING AGENCIES, STATIONS, AND PERSONNEL NORTH CENTRAL REGION, AGRICULTURAL RESEARCH SERVICE UNITED STATES DEPARTMENT OF AGRICULTURE

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Agronomists and plant pathologists in the United States and Canada who are interested in flax improvement have cooperated by growing the Regional Flax Nurseries from which the data in this report have been compiled. A list of the cooperating agencies and personnel is given on page 2. The writers of this report wish to express their sincere appreciation to individuals who undertook to grow one or more of these nurseries during the past 44 years.

REGIONAL VARIETAL TRIALS IN 1982

The Cooperative Regional Nursery in 1982 consisted of varieties grown in nurseries at 18 locations. The varieties included in the trials are listed in table 1, and the stations from which data were obtained are given in table 2.

This report covers agronomic, disease, and seed quality data reported from the stations in 1982. The Cooperative Regional Nursery has been grown for 44 years from 1939 to 1982, and data have been reported from a total of 1,177 trials. A total of 318 varieties or selections have been grown for 1 or more years.

All data are reported in the metric system. Several conversion factors are shown to aid in converting figures to the other system.

Conversion Factors

$$0.777 \times \text{g/l} = \text{lb/bu}$$

$$.892 \times \text{kg/ha} = \text{lb/A}$$

$$.01593 \times \text{kg/ha} = \text{bu/A}$$

$$\text{NMR Reading/wt. of sample/constant} = \text{oil \%}$$

¹ Joint progress report of cooperative investigations by the State Agricultural Experiment Stations, Canadian Department of Agriculture, Canadian Province Universities, and the U.S. Department of Agriculture that contains preliminary data, interpretation of which may be modified by additional experimentation.

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TABLE 1. — VARIETIES OF FLAX GROWN IN COOPERATIVE REGIONAL NURSERIES IN 1982

VARIETY OR CROSS	C.I. NUMBER	SOURCE	YEAR ENTERED
BISCN	389	NORTH DAKOTA	1927
LINOTT	2522	CANADA	1967
CULBERT	2776	MINNESOTA	1972
DUFFERIN	2814	CANADA	1975
CLARK (LINOTT/C12783)	2925	SOUTH DAKOTA	1980
N925 BR/NORSTAR//LINOTT	2932	NORTH DAKOTA	1980
N930 M3P3 153-1 CULBERT/BISON	2934	NORTH DAKOTA	1980
NORLIN (RAJA/ROCKET)	2935	CANADA	1980
M 903 CULBERT/S017	2938	MINNESOTA	1981
M 023 CULBERT/S088(C12928SEL)	2941	MINNESOTA	1981
SDJ09 C12790/N419	2943	SOUTH DAKOTA	1981
M106 MECOR(TA/NORED	3051	MINNESOTA	1982
M109 S088/3217	3052	MINNESOTA	1982
M110 CULBERT/S017	3053	MINNESOTA	1982
M112 CULBERT/S088	3054	MINNESOTA	1982
M118 C12S38 L11	3055	MINNESOTA	1982
SDT8123 C1(095/CULBERT79//WISHEK	3056	SOUTH DAKOTA	1982
SDT8105 M7605/W(SHEK//CULBERT79	3057	SOUTH DAKOTA	1982
SDT8103 LINOTT/NORED	3058	SOUTH DAKOTA	1982
SDT8122 C12791/CULBERT79	3059	SOUTH DAKOTA	1982
N119	3060	NORTH DAKOTA	1982
N106	3061	NORTH DAKOTA	1982
N122	3062	NORTH DAKOTA	1982
U105 H40//DUFFERIN/CULBERT	3063	NORTH DAKOTA	1982
U120 M3P3 794-1 CULBERT/BISON	3064	NORTH DAKOTA	1982
FP707 FPS79/LINOTT	3065	CANADA	1982
ADDITIONAL VARIETIES*****			
NORSTAR	2290		
WISHEK	2822		
CULBERT 79	2838		
FLOR	2896		
MCGREGOR	2921		

TABLE 2. — AVERAGE YIELDS OF SEED, LEAST SIGNIFICANT DIFFERENCES, AND PAGE NUMBERS OF DATA TABLES FROM STATIONS IN 1982

STATION	AVG. YIELD KG/HA	LSD (.05) KG PERCENT	PAGE NO. OF TABLE
MINNESOTA			
ST. PAUL (EARLY)	1737	164 9	5
LAMBERTON (EARLY)	2140	230 11	5
LAMBERTON (LATE)	1204	243 20	5
MORRIS (EARLY)	2168	223 10	6
MORRIS (LATE)	1774	188 11	6
CRUICKSTON (EARLY)	891	179 20	6
STEPHEN (EARLY)	712	172 24	7
SOUTH DAKOTA			
BROOKINGS (EARLY)	1763	286 16	7
NORTH DAKOTA			
CARRINGTON (EARLY)	1286	541 42	7
MINGT (EARLY)	1293	386 30	8
FARGO (EARLY)	1212	131 11	8
FARGO (LATE)	615	175 22	8
LANGDON (EARLY)	906	0 0	9
MANITOBA			
MORDEN (EARLY)	1768	375 21	9
PORTAGE (EARLY)	1982	250 13	9
WINNIPEG (EARLY)	2324	207 9	10
SASKATCHEWAN			
SASKATOON (EARLY)	1674	271 16	10
MONTANA			
SIDNEY (EARLY)	1168	176 15	10

LEAST SIGNIFICANT DIFFERENCE

Plot size and number of replications of the different tests varied, but most plots were near 5 m long with three replications. Least significant differences at the 5 percent point have been calculated for all stations. Average seed yields of the various tests, together with the least significant differences calculated both in kilograms and in percent of the mean, are shown in table 2.

Agronomic data from 17 nurseries by 14 stations are shown in table 3. Varieties are listed in systematic order with a column indicating yield rank. Included with the experimental varieties were four check varieties (Bison, Linott, Culbert, and Dufferin). Additional varieties were included at a number of stations. In table 5 the comparative yield of all varieties at all stations is shown as percent of checks.

TABLE 3.—YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN REGIONAL TRIALS
IN 1982 AT DIFFERENT LOCATIONS

ST. PAUL, MINNESOTA (EARLY)										SEEDED 5/ 1 HARVESTED			2.2300 SQUARE METERS		
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L G	W T	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD			
		FIRST	FULL	MATURITY								RANK	PER HA	% CHECKS	
389	3	50	56	74	4	2					11	1799	105		
2522	15	49	57	71	5	5					26	1479	86		
2776	10	48	55	67	1	3					12	1795	104		
2814	7	54	60	69	2	2					10	1804	105		
2925	3	50	57	69	3	2					18	1717	100		
2932	3	51	57	74	2	2					6	1866	109		
2934	3	50	58	65	1	2					4	1970	115		
2935	3	51	59	70	5	2					25	1605	93		
2938	2	48	56	67	1	2					5	1907	111		
2941	2	49	57	65	2	4					7	1853	108		
2943	2	53	60	68	3	2					20	1675	97		
3051	1	49	55	67	1	2					9	1832	107		
3052	1	48	54	64	2	1					16	1723	100		
3053	1	48	55	67	1	2					23	1659	96		
3054	1	51	58	71	2	1					2	2026	118		
3055	1	50	57	72	1	1					3	1989	116		
3056	1	52	60	72	2	3					14	1739	101		
3057	1	48	55	63	5	2					21	1671	97		
3058	1	50	55	65	2	2					13	1768	103		
3059	1	49	57	67	2	2					21	1671	97		
3060	1	48	54	69	6	4					8	1846	107		
3061	1	49	55	71	5	4					17	1721	100		
3062	1	49	55	71	6	4					19	1702	99		
3063	1	48	55	63	2	2					15	1738	101		
3064	1	51	58	65	2	2					1	2031	118		
3065	1	54	60	67	3	2					24	1641	95		
2290	18	54	60	73	1	2						1717			
2822	6	50	57	69	5	5						1512			
2838	6	49	56	65	2	3						1481			
2896	5	53	60	64	6	5						1391			
2921	4	55	61	65	3	1						1508			
STATION AVERAGE 1737 KG PER HECTARE; LSD(.05) = 164 KG/HA.; F = 7.7454															

LAMBERTON, MINNESOTA (EARLY)						SEEDED 4/28 HARVESTED				2.2300 SQUARE METERS				
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L G	# T	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM	MATURITY								RANK	KG PER HA	% CHECKS
389	20	52			70	4	4			393		26	1834	89
2522	13	51			65	3	4			397		19	2010	97
2776	11	51			62	3	3			404		18	2122	103
2814	8	56			71	3	5			414		2	2310	112
2925	3	53			65	3	4			398		20	2005	97
2932	3	52			70	4	5			395		9	2233	108
2934	3	53			66	4	4			403		7	2257	109
2935	3	52			65	3	3			394		6	2260	109
2938	2	50			64	2	3			403		10	2213	107
2941	2	51			63	4	5			413		14	2171	105
2943	2	54			66	3	3			413		8	2246	109
3051	1	51			64	4	5			435		24	1907	92
3052	1	50			62	3	4			407		11	2209	107
3053	1	52			63	3	3			403		3	2297	111
3054	1	52			62	6	7			399		25	1898	92
3055	1	52			68	2	4			404		1	2360	114
3056	1	53			70	2	2			400		12	2194	106
3057	1	50			64	3	4			415		13	2174	105
3058	1	51			63	3	3			406		4	2286	110
3059	1	51			64	3	3			413		16	2130	103
3060	1	50			66	3	4			393		23	1917	93
3061	1	50			72	3	3			397		17	2127	103
3062	1	50			69	3	4			386		21	1992	96
3063	1	49			62	4	5			402		15	2158	104
3064	1	53			66	3	3			396		5	2275	110
3065	1	54			69	5	6			403		22	1982	96
2290	19	55			71	2	3			394			2391	
2822	6	51			65	4	5			393			1965	
2838	6	51			60	3	3			403			1940	
2896	5	55			64	3	4			395			2082	
2921	4	57			70	3	4			389			2367	
STATION AVERAGE 2140 KG PER HECTARE; LSD(.05) = 230 KG/HA.; F = 3.6686														

LAMBERTON, MINNESOTA (LATE)					SEEDED 6/16 HARVESTED					2.2300 SQUARE METERS					
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L G	W I	TEST WT	1000 SEED WT	OIL %	IODINE VALUE	YIELD KG	RANK	PER HA	% CHECKS
		FIRST BLOOM	FULL BLOOM	MATURITY											
389	15	37		72	6							25	926	82	
2522	12	35		70	4							15	1186	105	
2776	8	36		70	3							3	1378	122	
2814	5	43		86	3							22	1013	90	
2925	3	36		66	5							17	1133	101	
2932	3	37		76	5							16	1174	104	
2934	3	40		71	5							20	1059	94	
2935	3	38		67	5							24	994	88	
2938	2	37		68	5							11	1240	110	
2941	2	39		75	4							9	1282	114	
2943	2	41		82	4							8	1292	115	
3051	1	38		69	7							23	1008	90	
3052	1	36		72	3							5	1339	119	
3053	1	37		71	5							4	1355	120	
3054	1	39		67	8							26	811	72	
3055	1	39		80	3							7	1307	116	
3056	1	39		78	4							10	1249	111	
3057	1	34		69	4							13	1198	106	
3058	1	36		72	3							12	1230	109	
3059	1	38		80	4							2	1390	123	
3060	1	35		71	5							20	1059	94	
3061	1	37		72	5							18	1130	100	
3062	1	36		67	4							19	1080	96	
3063	1	37		71	4							6	1337	119	
3064	1	40		78	5							14	1191	106	
3065	1	41		79	4							1	1508	134	
2290	14	41		77	5								1243		
2822	3	35		68	5								1230		
2838	3	36		68	4								1260		
2896	3	38		67	3								1273		
2921	4	43		83	4								1433		
STATION AVERAGE 1204 KG PER HECTARE; LSD(.05) = 243 KG/HA.; F = 3.2793															

TABLE 3.—YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN REGIONAL TRIALS
IN 1982 AT DIFFERENT LOCATIONS—CONTINUED

MORRIS MINNESOTA (EARLY)					SEEDED 5/ 6 HARVESTED					2.2300 SQUARE METERS					
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L		W		1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		% CHECKS
		FIRST BLOOM	FULL BLOOM	MATURITY		D	L	W	T				WT	KG PER HA	
389	41	54	57		64						393		20	2000	91
2522	14	52	55		58						402		16	2174	99
2776	9	53	56		56						405		19	2103	96
2814	6	57	61		69						412		1	2485	113
2925	2	53	55		59						397		8	2257	103
2932	2	53	57		64						400		10	2234	102
2934	2	53	58		61						398		6	2298	105
2935	2	54	59		63						396		3	2367	108
2938	1	52	56		55						409		9	2248	103
2941	1	53	57		60						452		7	2294	105
2943	1	54	59		57						411		4	2357	108
3051	1	53	57		56						432		22	1949	89
3052	1	52	57		55						417		23	1935	88
3053	1	53	56		60						404		5	2342	107
3054	1	54	57		55						411		12	2227	102
3055	1	53	57		61						403		15	2180	100
3056	1	54	57		61						407		12	2227	102
3057	1	52	55		56						421		11	2228	102
3058	1	52	56		56						420		14	2172	100
3059	1	53	57		61						408		17	2121	97
3060	1	53	58		61						399		25	1817	83
3061	1	54	58		65						408		26	1756	80
3062	1	53	57		58						406		24	1852	85
3063	1	52	56		56						413		21	1991	91
3064	1	54	58		55						403		18	2116	97
3065	1	54	57		58						413		2	2440	111
2290	18	54	59		66									2127	
2822	5	52	55		58									2194	
2838	5	52	56		55									2062	
2896	4	54	58		58									2300	
2921	3	55	60		52									2218	
STATION AVERAGE 2168 KG PER HECTARE; LSD(.05) = 223 KG/HA. ; F = 5.1201															

MORRIS		MINNESOTA			(LATE)		SEEDED 5/24 HARVESTED				2.2300 SQUARE METERS				
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L		W		TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD KG PER HA	% CHECKS
		FIRST BLOOM	FULL BLOOM	MATURITY		D	T	L	T						
389	26	50	53		65								20	1683	94
2522	13	49	52		62								13	1765	98
2776	8	49	53		59								18	1713	95
2814	4	56	62		74								4	2014	112
2925	1	49	52		63								8	1889	105
2932	1	51	54		64								14	1754	98
2934	1	53	57		68								11	1816	101
2935	1	51	54		67								9	1886	105
2938	1	49	52		65								2	2023	113
2941	1	51	55		67								1	2095	117
2943	1	53	59		71								7	1914	107
3051	1	51	54		61								15	1727	96
3052	1	49	53		63								17	1714	96
3053	1	51	55		65								5	1953	109
3054	1	52	56		64								16	1720	96
3055	1	52	56		70								2	2023	113
3056	1	52	56		72								24	1596	89
3057	1	49	52		60								19	1699	95
3058	1	50	53		60								22	1627	91
3059	1	50	54		70								10	1825	102
3060	1	50	53		65								25	1460	81
3061	1	49	53		66								26	1602	89
3062	1	49	52		62								26	1378	77
3063	1	49	52		59								21	1653	92
3064	1	53	57		68								11	1816	101
3065	1	54	58		72								6	1928	107
2290	11	53	58		74									1792	
2822	3	49	52		62									1696	
2838	3	49	52		58									1565	
2896	3	52	54		59									1689	
2921	2	53	60		74									1962	
STATION AVERAGE 1774 KG PER HECTARE; LSD(.05) = 188 KG/HA.; F = 6.4834															

CROOKSTON, MINNESOTA (EARLY)					SEEDED 5/ 7 HARVESTED					2.2300 SQUARE METERS				
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L G	W T	W T	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD KG PER HA	% CHECKS
		FIRST BLOOM	FULL BLOOM	MATURITY										
389	42	64		112	57							21	742	100
2522	15	62		108	53							22	736	99
2776	11	61		111	52							15	847	114
2814	8	67		112	54							25	656	88
2925	3	64		112	50							13	850	114
2932	3	60		111	50							18	810	109
2934	3	63		113	54							16	816	109
2935	3	62		110	56							1	1092	147
2938	2	63		113	49							20	783	105
2941	2	62		112	51							7	1008	135
2943	2	63		110	51							2	1053	141
3051	1	62		111	53							8	1007	135
3052	1	62		110	50							19	802	108
3053	1	63		112	50							11	881	118
3054	1	63		113	53							4	1046	140
3055	1	61		107	50							9	992	133
3056	1	62		110	56							5	1020	137
3057	1	60		109	47							12	863	116
3058	1	62		111	53							14	849	114
3059	1	62		111	50							5	1020	137
3060	1	62		112	52							23	705	95
3061	1	64		114	52							26	638	86
3062	1	61		113	50							24	678	91
3063	1	63		111	49							17	813	109
3064	1	63		111	52							10	989	133
3065	1	61		108	45							3	1052	141
2290	19	62		109	52								901	
2822	6	61		111	53								1146	
2838	6	60		110	44								826	
2896	5	62		108	50								1073	
2921	4	63		112	54								901	
STATION AVERAGE 891 KG PER HECTARE; LSD(.05) = 179 KG/HA.; F = 4.8661														

TABLE 3.—YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN REGIONAL TRIALS
IN 1982 AT DIFFERENT LOCATIONS—CONTINUED

STEPHEN, MINNESOTA (EARLY)														SEEDED 5/ 6 HARVESTED					2.2300 SQUARE METERS				
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L G	W I	W I	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD			RANK	PER HA	CHECKS						
		FIRST BLOOM	FULL MATURITY									KG	HA	%									
389	6	61		47								21	629			99							
2522	6	61		43								26	506			80							
2776	6	61		40								23	624			98							
2814	6	62		45								6	781			123							
2925	3	61		42								17	651			103							
2932	3	61		47								11	730			115							
2934	3	61		41								10	735			116							
2935	3	61		48								3	859			135							
2938	2	62		44								7	780			123							
2941	2	61		42								8	769			121							
2943	2	60		41								4	852			134							
3051	1	60		39								15	680			107							
3052	1	62		38								22	627			99							
3053	1	61		40								13	687			108							
3054	1	60		43								2	896			141							
3055	1	61		42								5	834			131							
3056	1	61		43								25	571			90							
3057	1	61		40								16	662			104							
3058	1	61		41								24	597			94							
3059	1	61		43								9	766			121							
3060	1	62		44								18	642			101							
3061	1	63		47								14	681			107							
3062	1	62		43								19	633			100							
3063	1	61		39								19	633			100							
3064	1	62		37								12	715			113							
3065	1	60		42								1	956			151							
2290	6	61		41									708										
2822	6	60		41									671										
2838	6	61		39									669										
2896	5	61		42									736										
2921	4	61		42									780										
STATION AVERAGE														712 KG PER HECTARE; LSD(.05) = 172 KG/HA. ; F =	2.6716								

BROOKINGS, SOUTH DAKOTA (EARLY)										SEEDED 4/29 HARVESTED				1.9500 SQUARE METERS			
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L G	W I	W I	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD			RANK	PER HA	CHECKS
		FIRST BLOOM	FULL BLOOM									MATURITY	KG	%			
389	43		60	58	3					40.3		23	1577		93		
2522	16		57	59	2					40.6		21	1637		97		
2776	11		57	55	1					41.6		17	1700		100		
2814	8		61	59	4					41.4		7	1861		110		
2925	3		58	56	3					40.2		12	1817		107		
2932	3		59	58	2					39.5		11	1822		108		
2934	3		61	59	2					40.7		5	1866		110		
2935	3		59	54	2					39.8		20	1649		97		
2938	2		58	56	3					38.9		5	1866		110		
2941	2		57	55	3					44.9		15	1805		107		
2943	2		61	61	1					41.1		10	1829		108		
3051	1		58	60	3					43.8		26	1523		90		
3052	1		56	53	2					42.0		14	1813		107		
3053	1		58	55	1					40.6		1	1977		117		
3054	1		58	55	5					40.5		25	1526		90		
3055	1		58	62	3					40.5		18	1685		99		
3056	1		61	61	1					41.0		4	1882		111		
3057	1		57	56	2					40.5		2	1958		116		
3058	1		58	52	1					40.3		8	1854		109		
3059	1		58	57	2					42.3		21	1637		97		
3060	1		56	55	2					41.1		19	1680		99		
3061	1		57	60	2					41.4		16	1747		103		
3062	1		56	57	2					41.5		24	1560		92		
3063	1		57	56	2					41.4		9	1837		108		
3064	1		61	59	1					40.7		12	1817		107		
3065	1		61	60	2					40.3		3	1894		112		
STATION AVERAGE 1763 KG PER HECTARE; LSD(.05) = 286 KG/HA. ; F = 1.6789																	

CARRINGTON, NORTH DAKOTA (EARLY)										SEEDED 5/14 HARVESTED			1.4900 SQUARE METERS				
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L G	W I	W I	TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD			RANK	PER HA	CHECKS
		FIRST BLOOM	FULL BLOOM									KG	HA	%			
389	16											24	1080	96			
2522	12											23	1085	97			
2776	1											19	1139	101			
2814	5											18	1191	106			
2925	1											5	1424	127			
2932	1											13	1288	115			
2934	1											4	1444	128			
2935	1											11	1327	118			
2938	1											7	1404	125			
2941	1											20	1124	100			
2943	1											25	1078	96			
3051	1											12	1312	117			
3052	1											21	1100	98			
3053	1											14	1249	111			
3054	1											16	1218	108			
3055	1											2	1634	145			
3056	1											8	1375	122			
3057	1											22	1093	97			
3058	1											1	1659	148			
3059	1											9	1345	120			
3060	1											6	1414	126			
3061	1											3	1619	144			
3062	1											26	1028	91			
3063	1											15	1248	111			
3064	1											10	1333	119			
3065	1											17	1211	108			
STATION AVERAGE 1286 KG PER HECTARE; LSD(.05) = 541 KG/HA. ; F =												0.8674					

TABLE 3.—YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN REGIONAL TRIALS
IN 1982 AT DIFFERENT LOCATIONS—CONTINUED

MINOT		NORTH DAKOTA (EARLY)				SEEDED 5/18 HARVESTED				1.4900 SQUARE METERS						
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO				HEIGHT CM	L			TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST	FULL	BLOOM	BLOOM		O	L	W					RANK	KG PER HA	% CHECKS
389	16											39.9		1	1696	144
2522	13											40.5		25	800	68
2776	10											40.7		19	1154	98
2814	6											41.9		24	1052	85
2925	3											40.1		2	1593	136
2932	3											39.5		20	1124	96
2934	3											39.9		8	1454	124
2935	3											39.7		5	1565	133
2938	2											41.0		7	1458	124
2941	2											43.8		26	749	64
2943	2											43.2		9	1436	122
3051	1											43.3		6	1463	124
3052	1											40.8		21	1112	95
3053	1											40.9		23	1057	90
3054	1											40.4		4	1587	135
3055	1											40.6		12	1350	115
3056	1											41.0		22	1088	93
3057	1											42.4		3	1590	135
3058	1											41.0		17	1219	104
3059	1											41.8		11	1354	115
3060	1											40.4		15	1251	106
3061	1											41.0		18	1174	100
3062	1											40.8		16	1244	106
3063	1											40.4		10	1431	122
3064	1											40.0		13	1310	111
3065	1											40.2		14	1392	111
STATION AVERAGE 1293 KG PER HECTARE; LSD(.05) = 386 KG/HA. ; F = 3.0687																

FARGO		NORTH DAKOTA (EARLY)				SEEDED 5/ 3 HARVESTED				1.4900 SQUARE METERS					
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L O I I D L L			TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		
		FIRST BLOOM	FULL BLOOM	MATURITY		RANK	KG PER HA	% CHECKS							
389	41	52			55						39.6		12	1241	103
2522	15	52			56						40.7		15	1209	100
2776	10	50			48						42.1		19	1147	95
2814	8	55			53						41.7		13	1239	102
2925	3	52			53						41.6		3	1347	111
2932	3	53			53						40.8		18	1152	95
2934	3	51			50						40.9		2	1352	112
2935	3	53			52						40.1		17	1196	99
2938	2	50			47						40.5		14	1211	100
2941	2	52			49						43.4		5	1278	106
2943	2	51			52						41.1		1	1364	113
3051	1	53			49						42.8		25	1095	91
3052	1	50			48						41.5		23	1119	93
3053	1	52			48						40.7		21	1144	95
3054	1	51			53						41.5		7	1256	104
3055	1	51			50						38.7		11	1244	103
3056	1	52			54						40.6		8	1253	104
3057	1	50			48						42.0		10	1246	103
3058	1	52			48						40.6		24	1098	91
3059	1	50			50						41.3		9	1251	103
3060	1	53			49						39.9		26	984	81
3061	1	53			55						40.3		19	1147	95
3062	1	52			53						40.5		22	1122	93
3063	1	50			48						40.5		16	1199	99
3064	1	51			48						39.9		6	1273	105
3065	1	52			53						40.6		4	1335	110
STATION AVERAGE 1212 KG PER HECTARE; $SD(.05) = 131$ KG/HA. ; F = 3.8187															

FARGO		NORTH DAKOTA (LATE)				SEEDED 6/15 HARVESTED				1.4900 SQUARE METERS					
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO				HEIGHT CM	L			1000 SEED WT G/L	OIL %	IODINE VALUE	YIELD		
		FIRST	FULL	BLOOM	BLOOM		O	L	W				RANK	KG PER HA	% CHECKS
389	40					G	I	I					23	466	103
2522	14												21	486	107
2776	9												8	692	153
2814	7												26	169	37
2925	2												4	781	172
2932	2												5	770	170
2934	2												22	478	105
2935	2												9	674	149
2938	1												15	632	139
2941	1												18	590	130
2943	1												12	645	142
3051	1												3	808	178
3052	1												6	724	160
3053	1												10	656	145
3054	1												1	874	193
3055	1												20	520	115
3056	1												16	622	137
3057	1												13	640	141
3058	1												13	640	141
3059	1												17	600	132
3060	1												24	392	86
3061	1												19	528	116
3062	1												25	389	86
3063	1												7	704	155
3064	1												2	855	189
3065	1												11	851	144
STATION AVERAGE 615 KG PER HECTARE;LSD(.05) = 175 KG/HA. ; F = 6.4714															

TABLE 3.—YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN REGIONAL TRIALS
IN 1982 AT DIFFERENT LOCATIONS—CONTINUED

LANGDON, NORTH DAKOTA (EARLY)										SEEDED 5/7 HARVESTED				10.0000 SQUARE METERS			
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L O	W I	W L	TEST WT G/L	1000 SEED WT GMS	OIL %	ICOOINE VALUE	YIELD		RANK	PER HA	%	CHECKS
		FIRST BLOOM	FULL BLOOM									KG	HA				
389	5			54				90				25	690			89	
2522	5			64				90				19	854			110	
2776	5			62				91				23	777			100	
2814	5			59				90				21	795			102	
2925	2			62				88				12	917			118	
2932	2			54				90				9	949			122	
2934	2			62				91				5	976			125	
2935	2			58				90				18	856			110	
2938	2			57				90				8	964			124	
2941	2			58				90				14	905			116	
2943	2			53				88				1	1130			145	
3051	1			55				88				4	986			127	
3052	1			52				90				15	879			113	
3053	1			55				90				22	782			101	
3054	1			55				90				12	917			118	
3055	1			53				90				10	924			119	
3056	1			61				90				16	869			112	
3057	1			54				90				3	1010			130	
3058	1			54				90				17	862			111	
3059	1			59				90				10	924			119	
3060	1			59				90				7	967			124	
3061	1			62				88				6	968			124	
3062	1			56				90				20	824			106	
3063	1			54				90				25	745			96	
3064	1			51				90				24	763			98	
3065	1			55				90				2	1053			135	
2822	1			61				90					887				
2838	1			51				88					943				
2896	1			54				90					1084				
2921	1			63				90					979				
STATION AVERAGE 906 KG PER HECTARE (LSD(.05) = 0 KG/HA. ; F = 0.0																	

MORON, MANITOBA (EARLY)										SEEDED 5/27 HARVESTED				3.0658 SQUARE METERS			
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L O	W I	W L	TEST WT G/L	1000 SEED WT GMS	OIL %	ICOOINE VALUE	YIELD		RANK	PER HA	%	CHECKS
		FIRST BLOOM	FULL BLOOM									KG	HA				
389	3			99				73				26	948			61	
2522	12			98				71				15	1788			115	
2776	10			101				66				16	1767			114	
2814	7			102				76				18	1706			110	
2925	2			99				68				23	1593			103	
2932	2			99				75				4	2040			131	
2934	2			103				71				9	1869			120	
2935	2			100				70				11	1814			117	
2938	1			100				69				17	1710			110	
2941	1			102				65				7	1909			123	
2943	1			100				73				6	1974			127	
3051	1			100				67				24	1360			88	
3052	1			100				64				8	1876			121	
3053	1			101				70				20	1670			108	
3054	1			100				67				25	1156			74	
3055	1			99				78				3	2098			135	
3056	1			102				79				22	1635			105	
3057	1			100				70				14	1789			115	
3058	1			99				66				1	2301			148	
3059	1			101				77				2	2196			141	
3060	1			98				70				12	1796			116	
3061	1			99				71				13	1753			116	
3062	1			99				70				10	1815			117	
3063	1			99				65				5	2019			130	
3064	1			102				72				21	1668			107	
3065	1			101				72				19	1679			108	
STATION AVERAGE 1768 KG PER HECTARE (LSD(.05) = 375 KG/HA. ; F = 4.77E5																	

PORTAGE, MANITOBA (EARLY)										SEEDED 5/26 HARVESTED				4.5987 SQUARE METERS			
CI NUMBER	YEARS GROWN	DAYS FROM SOWING TO		HEIGHT CM	L O	W I	W L	TEST WT G/L	1000 SEED WT GMS	OIL %	ICOOINE VALUE	YIELD		RANK	PER HA	%	CHECKS
		FIRST BLOOM	FULL BLOOM									KG	HA				
389	7			103				65				18	1806			97	
2522	7			98				61				17	1893			101	
2776	7			104				55				21	1790			96	
2814	7			109				74				14	1958			105	
2925	3			98				61				6	2128			114	
2932	3			102				61				9	2081			112	
2934	3			104				64				15	1953			105	
2935	3			102				61				3	2200			118	
2938	2			102				59				2	2176			122	
2941	2			105				64				7	2107			113	
2943	2			102				66				10	2072			111	
3051	2			101				60				11	2063			111	
3052	1			102				52				26	1704			92	
3053	1			104				69				4	2179			117	
3054	1			102				57				13	2061			111	
3055	1			100				68				1	2388			128	
3056	1			106				69				22	1783			96	
3057	1			104				63				5	2143			115	
3058	1			102				58				25	1712			92	
3059	1			108				71				7	2107			113	
3060	1			99				59				19	1804			97	
3061	1			101				63				24	1757			95	
3062	1			98				65				16	1926			104	
3063	1			103				52				23	1774			97	
3064	1			105				62				20	1800			97	
3065	1			103				68				11	2063			111	
STATION AVERAGE 1982 KG PER HECTARE (LSD(.05) = 250 KG/HA. ; F = 4.4974																	

TABLE 3.—YIELD AND DATA FOR FLAX VARIETIES AND SELECTIONS GROWN IN REGIONAL TRIALS
IN 1982 AT DIFFERENT LOCATIONS—CONTINUED

WINNIPEG, MANITOBA (EARLY)					SEEDED 5/13 HARVESTED					3.0658 SQUARE METERS					
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L O G	W I T	N I T	TEST WT G/L	1000 SEED WT GMS	DIL %	IODINE VALUE	YIELD		% CHECKS
		FIRST BLOOM	FULL MATURITY	RANK									KG PER HA		
389	13	54			67				94	6.5			25	2147	93
2522	11	53			65				95	6.5			11	2328	101
2776	8	54			56				94	6.0			22	2193	95
2814	5	56			74				94	6.5			3	2522	110
2925	3	54			65				93	6.5			6	2398	104
2932	3	55			69				92	8.0			16	2279	99
2934	3	57			67				93	7.5			12	2319	101
2935	3	55			62				88	6.0			17	2275	99
2938	2	56			64				91	6.5			10	2354	102
2941	2	52			59				90	6.5			5	2452	107
2943	2	55			70				91	7.0			2	2556	111
3051	1	53			60				94	7.5			19	2260	98
3052	1	53			56				91	7.5			24	2160	94
3053	1	54			58				91	7.0			1	2580	112
3054	1	52			62				94	6.5			15	2284	99
3055	1	53			60				95	7.0			14	2294	100
3056	1	54			70				93	7.5			21	2202	96
3057	1	52			54				92	7.5			18	2262	98
3058	1	52			58				92	5.5			20	2240	97
3059	1	55			65				92	7.0			9	2372	103
3060	1	53			67				90	7.0			23	2181	95
3061	1	53			70				92	7.0			13	2315	101
3062	1	53			65				89	7.5			26	2145	93
3063	1	54			55				85	7.0			7	2396	104
3064	1	57			64				92	7.0			8	2387	104
3065	1	53			61				91	7.0			4	2520	110
STATION AVERAGE 2324 KG PER HECTARE (LSD(.05) = 207 KG/HA. ; F = 2.9317															

SASKATOON, SASKATCHEWAN (EARLY)										SEEDED 5/14 HARVESTED				5.2000 SQUARE METERS			
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L W N			TEST WT G/L	1000 SEED WT GMS	DIL %	IODINE VALUE	YIELD				
		FIRST BLOOM	FULL BLOOM	MATURITY		D G	I L	N T					RANK	PER HA	% CHECKS		
389	12	71	19	65	60				58			4	1818	110			
2522	12	71	19	65	60				59			17	1652	100			
2776	9	70	19	54	58				58			25	1396	84			
2814	8	74	19	53	58				58			10	1763	106			
2925	3	74	19	63	58				58			7	1785	108			
2932	3	70	18	58	58				58			14	1704	103			
2934	3	68	19	55	57				57			16	1673	101			
2935	3	76	19	60	57				57			5	1816	110			
2938	2	69	20	59	57				57			3	1872	113			
2941	2	73	20	59	57				57			6	1769	107			
2943	2	73	19	54	57				57			1	1922	116			
3051	1	69	19	57	58				58			13	1709	103			
3052	1	69	19	56	57				57			24	1406	85			
3053	1	70	20	55	58				58			15	1698	102			
3054	1	73	20	55	58				58			11	1760	106			
3055	1	68	18	56	59				59			20	1536	93			
3056	1	69	19	56	59				59			23	1422	86			
3057	1	69	19	58	58				58			6	1807	109			
3058	1	73	20	57	58				58			18	1646	99			
3059	1	71	20	58	58				58			12	1756	106			
3060	1	68	19	57	58				58			21	1515	91			
3061	1	68	20	58	57				57			22	1485	90			
3062	1	68	20	58	58				58			26	1362	82			
3063	1	70	20	57	58				58			19	1550	94			
3064	1	66	20	54	58				58			9	1765	107			
3065	1	73	18	56	58				58			2	1921	116			
STATION AVERAGE 1674 KG PER HECTARE (LSD(.05) = 271 KG/HA. ; F = 2.9638																	

SIDNEY, MONTANA (EARLY)					SEEDED 5/20 HARVESTED					2.9729 SQUARE METERS					
C1 NUMBER	YEARS GROWN	DAYS FROM SOWING TO			HEIGHT CM	L W N			TEST WT G/L	1000 SEED WT GMS	OIL %	IODINE VALUE	YIELD		% CHECKS
		FIRST	FULL	BLOOM		MATURITY	D	I					N	RANK	
389	7	49			58				72	4.73			6	1244	124
2522	7	51			66				72	4.75			26	816	81
2776	7	48			55				73	4.77			23	1076	107
2814	7	54			64				72	4.77			25	890	88
2925	3	48			56				72	4.73			1	1401	139
2932	3	49			62				72	4.71			24	1071	106
2934	3	49			55				73	4.62			8	1223	122
2935	3	50			56				72	4.53			17	1162	115
2938	2	47			55				72	4.91			3	1299	129
2941	2	49			54				70	5.06			5	1255	125
2943	2	49			58				72	4.77			19	1138	113
3051	1	49			57				71	5.09			7	1228	122
3052	1	48			53				71	4.89			21	1089	108
3053	1	48			50				72	4.82			2	1328	132
3054	1	49			53				72	4.82			4	1288	128
3055	1	49			59				72	4.78			10	1208	120
3056	1	51			64				71	4.77			9	1218	121
3057	1	48			54				73	4.98			15	1175	117
3058	1	49			54				73	4.94			11	1197	119
3059	1	48			57				72	4.88			20	1102	109
3060	1	48			60				72	4.82			14	1184	118
3061	1	49			61				72	4.80			22	1086	108
3062	1	48			60				73	4.85			18	1141	113
3063	1	48			57				72	4.82			16	1173	117
3064	1	50			55				73	4.78			12	1187	118
3065	1	52			60				72	4.67			12	1187	118
2896	5	51			58				72	4.71			11	1162	116
2921	4	53			62				72	4.60			1	1150	115
STATION AVERAGE 1168 KG PER HECTARE (LSD(.05) = 176 KG/HA. ; F = 3.5657															

TABLE 6 — STATE AVERAGES

C I	MINNESOTA		ALL	SOUTH DAKOTA		ALL	NORTH DAKOTA		ALL	MANITOBA		ALL	OTHERS		ALL	ALL STATIONS		
	EARLY	LATE		EARLY	LATE		EARLY	LATE		EARLY	LATE		EARLY	LATE		EARLY	LATE	ALL
OVER 1 YEARS																		
389	1400	1304	1373	1577	0	1577	1176	466	1034	1633	0	1633	1531	0	1531	1416	1025	1351
2522	1381	1475	1408	1637	0	1637	987	486	886	1999	0	1999	1234	0	1234	1397	1145	1355
2776	1498	1547	1511	1700	0	1700	1054	692	981	2116	0	2116	1236	0	1236	1442	1261	1411
2814	1607	1513	1580	1861	0	1861	1069	169	889	2062	0	2062	1326	0	1326	1534	1065	1456
2925	1496	1511	1500	1817	0	1817	1320	781	1212	2039	0	2039	1593	0	1593	1592	1267	1538
2932	1574	1464	1543	1822	0	1822	1128	770	1056	2133	0	2133	1387	0	1387	1558	1232	1504
2934	1615	1437	1564	1866	0	1866	1306	478	1140	2047	0	2047	1448	0	1448	1613	1117	1531
2935	1636	1440	1580	1849	0	1849	1236	674	1123	2096	0	2096	1489	0	1489	1602	1184	1533
2938	1586	1631	1599	1866	0	1866	1259	632	1133	2113	0	2113	1585	0	1585	1623	1258	1568
2941	1619	1688	1638	1805	0	1805	1014	590	929	2152	0	2152	1512	0	1512	1563	1322	1523
2943	1636	1603	1627	1829	0	1829	1252	645	1130	2200	0	2200	1530	0	1530	1645	1283	1585
3051	1475	1367	1444	1523	0	1523	1214	808	1132	1894	0	1894	1468	0	1468	1491	1181	1439
3052	1459	1526	1478	1813	0	1813	1052	724	986	1913	0	1913	1247	0	1247	1436	1259	1407
3053	1573	1654	1596	1977	0	1977	1059	656	978	2143	0	2143	1513	0	1513	1569	1321	1527
3054	1618	1265	1517	1526	0	1526	1244	874	1170	1833	0	1833	1524	0	1524	1543	1135	1475
3055	1671	1665	1669	1685	0	1685	1288	520	1134	2260	0	2260	1372	0	1372	1647	1283	1587
3056	1550	1424	1514	1882	0	1882	1146	622	1041	1873	0	1873	1320	0	1320	1498	1156	1441
3057	1519	1448	1499	1958	0	1958	1234	640	1115	2064	0	2064	1491	0	1491	1578	1179	1511
3058	1538	1428	1507	1854	0	1854	1209	640	1095	2084	0	2084	1421	0	1421	1565	1165	1498
3059	1541	1607	1560	1637	0	1637	1218	600	1094	2225	0	2225	1429	0	1429	1583	1271	1531
3060	1385	1259	1349	1680	0	1680	1154	392	1001	1927	0	1927	1349	0	1349	1446	970	1367
3061	1384	1366	1379	1747	0	1747	1227	528	1087	1955	0	1955	1285	0	1285	1467	1086	1404
3062	1371	1229	1330	1560	0	1560	1054	389	921	1962	0	1962	1251	0	1251	1401	949	1326
3063	1466	1495	1474	1837	0	1837	1155	704	1065	2063	0	2063	1361	0	1361	1513	1231	1466
3064	1625	1503	1590	1817	0	1817	1169	855	1106	1951	0	1951	1476	0	1476	1561	1287	1516
3065	1614	1718	1643	1894	0	1894	1225	651	1110	2087	0	2087	1554	0	1554	1615	1362	1573
OVER 2 YEARS																		
389	1210	1118	1187	817	568	755	1085	466	1008	1518	0	1518	1327	0	1327	1208	878	1158
2522	1247	1307	1262	943	650	870	955	486	897	1809	0	1809	1179	0	1179	1232	1011	1199
2776	1279	1362	1300	821	629	773	1100	692	1049	1734	0	1734	1154	0	1154	1249	1081	1223
2814	1437	1202	1379	953	696	889	1177	169	1051	1860	0	1860	1233	0	1233	1367	894	1295
2925	1289	1310	1294	955	609	868	1233	781	1176	1846	0	1846	1436	0	1436	1359	1064	1315
2932	1331	1311	1326	923	630	850	1122	770	1078	1898	0	1898	1276	0	1276	1328	1067	1289
2934	1377	1211	1336	972	741	914	1274	478	1174	1867	0	1867	1314	0	1314	1386	970	1323
2935	1439	1261	1395	857	623	799	1210	674	1143	1865	0	1865	1368	0	1368	1385	1016	1329
2938	1366	1445	1386	941	638	865	1187	632	1118	1913	0	1913	1384	0	1384	1376	1121	1337
2941	1362	1388	1369	961	718	900	1115	590	1049	1992	0	1992	1414	0	1414	1377	1094	1334
2943	1407	1347	1392	992	729	926	1238	645	1164	1996	0	1996	1418	0	1418	1427	1083	1375
OVER 3 YEARS																		
389	1227	973	1170	1281	567	1162	1029	507	934	1368	1061	1307	1173	0	1173	1210	844	1145
2522	1304	1141	1268	1479	649	1341	912	521	840	1689	1368	1625	1095	0	1095	1284	999	1234
2776	1344	1267	1327	1369	628	1246	1034	711	975	1628	1403	1583	1055	0	1055	1293	1103	1260
2814	1432	929	1320	1556	692	1413	1127	265	970	1556	978	1440	1204	0	1204	1372	766	1265
2925	1364	1151	1316	1478	609	1333	1148	762	1077	1696	1501	1657	1224	0	1224	1374	1082	1323
2932	1379	1150	1328	1472	630	1331	1076	710	1010	1736	1457	1680	1122	0	1122	1356	1063	1305
2934	1355	1055	1288	1527	741	1396	1169	644	1073	1628	1284	1559	1199	0	1199	1365	980	1297
2935	1437	1055	1352	1464	622	1324	1132	631	1041	1688	1449	1640	1230	0	1230	1393	1000	1324

TABLE 7.—SUMMARY OF AGRONOMIC DATA OTHER THAN YIELD FOR VARIETIES OF FLAX GROWN IN THE COOPERATIVE REGIONAL TRIALS IN 1982

VARIETY OR C.I. NO.	DAYS FROM SOWING TO			HEIGHT AVG. (CM)	PASMO RATING (1 = BEST)	LODGING RATING (1 = BEST)
	FIRST BLOOM	FULL BLOOM	MATURITY			
	AVG. (DAYS)	AVG. (DAYS)	AVG. (DAYS)			
BISON	53	58	105	63	4	5
LINOTT	52	57	101	63	4	3
CULBERT	51	56	105	58	3	2
DUFFERIN	56	61	108	66	5	3
2925	52	57	103	60	4	4
2931	52	58	104	63	5	3
2934	53	59	107	61	4	4
2935	53	59	104	61	3	3
2938	52	57	105	59	3	4
2941	52	58	106	60	5	3
2943	54	60	104	61	3	2
3051	52	57	104	59	5	5
3052	51	56	104	56	4	2
3053	52	57	106	59	3	3
3054	53	58	105	59	7	7
3055	52	58	102	60	4	2
3056	53	59	106	65	2	3
3057	51	56	104	58	4	3
3058	52	57	104	58	3	2
3059	52	58	107	58	3	3
3060	52	56	103	61	4	3
3061	52	56	105	64	3	3
3062	52	56	103	61	4	3
3063	51	56	104	57	5	3
3064	54	58	106	60	3	3
3065	54	60	104	62	6	4
NO. OF TESTS	10	7	3	14	1	4

TABLE 8.—SUMMARY OF RESISTANCE TO FUSARIUM WILT FOR VARIETIES GROWN IN COOPERATIVE TRIALS
IN 1982 AND A 2- AND 3-YEAR MEAN

VARIETY OR C. I. NO.	1982				TWO-YEAR MEAN				THREE-YEAR MEAN			
	ST. PAUL, BREED- ING	MN PL. PATH	FARGO ND	MORDEN MAN	ST. PAUL, BREED- ING	MN PL. PATH	FARGO ND	MORDEN MAN	ST. PAUL, BREED- ING	MN PL. PATH	FARGO ND	MORDEN MAN
BISON	4	2	5	3	4	3	5	3	4	3	5	4
LINOTT	5	5	8	2	5	4	7	3	5	6	7	4
CULBERT	1	3	3	4	1	4	4	4	2	4	4	4
DUFFERIN	2	2	4	3	2	2	5	3	2	2	4	3
2925	3	3	5	2	3	3	5	3	3	3	5	3
2932	2	2	5	3	3	2	5	3	3	2	4	4
2934	1	2	4	2	1	2	4	2	1	2	3	3
2935	5	2	7	3	4	3	7	3	4	5	8	4
2938	1	2	1	3	1	2	1	4				
2941	2	4	1	4	2	3	1	3				
2943	3	2	4	3	4	3	5	3				
3051	1	2	6	3	2	3	6	4				
3052	2	1	6	4								
3053	1	2	1	3								
3054	2	1	4	3								
3055	1	1	4	4								
3056	2	3	7	3								
3057	5	2	6	2								
3058	2	2	4	3								
3059	2	2	4	4								
3060	6	4	7	2								
3061	5	4	6	3								
3062	6	4	6	3								
3063	2	2	5	4								
3064	2	3	4	1								
3065	3	2	7	2								

TABLE 9.—SUMMARY OF OIL PERCENTAGES OF FLAXSEED ENTRIES IN THE 1982 REGIONAL TRIALS,
2- AND 3-YEAR MEAN

VARIETY OR C. I. NO.	LAMBERTON (E)	MORRIS (E)	BROOKINGS SO (E)	FARGO NO (E)	MORRIS MAN (E)	PORTAGE MAN (E)	SIDNEY MT (E)	MEAN % 7 LOCATIONS	TWO- YEAR MEAN	THREE- YEAR MEAN
BISON	39.3	39.3	40.3	39.6	38.9	38.4	47.3	40.4	41.7	42.3
LINOTT	39.7	40.2	40.6	40.7	39.0	40.6	47.5	41.2	42.3	42.9
CULBERT	40.4	40.5	41.6	42.1	40.6	41.3	47.7	42.0	43.1	43.4
OUFFERIN	41.4	41.2	41.4	41.7	41.0	42.8	47.7	42.5	43.7	43.8
2925	39.8	39.7	40.2	41.6	38.5	39.4	47.3	40.9	42.4	42.9
2932	39.5	40.0	39.5	40.8	40.0	40.1	47.1	41.0	42.2	42.5
2934	40.3	39.8	40.7	40.9	37.8	39.3	46.2	40.7	42.3	42.6
2935	39.4	39.6	39.8	40.1	40.5	41.5	45.3	40.8	42.1	42.4
2938	40.3	40.9	38.9	40.5	39.0	42.5	49.1	41.6	43.1	
2941	41.3	45.2	44.9	43.4	41.4	42.2	50.6	44.1	45.9	
2943	41.3	41.1	41.1	41.0	41.0	41.3	47.7	42.1	43.5	
3051	43.5	43.2	43.8	42.8	41.2	42.7	50.9	44.0	44.0	
3052	40.7	41.7	42.0	41.5	41.0	40.3	48.9	42.3		
3053	40.3	40.4	40.6	40.7	40.0	41.1	48.2	41.6		
3054	39.9	41.1	40.5	41.5	39.8	40.7	48.2	41.7		
3055	40.4	40.3	40.5	38.7	38.4	41.2	47.8	41.0		
3056	40.0	40.7	41.0	40.6	41.6	39.1	47.7	41.5		
3057	41.5	42.1	40.5	42.0	40.9	43.4	49.8	42.9		
3058	40.6	42.0	40.3	40.6	40.7	39.8	49.4	41.9		
3059	41.3	40.8	42.3	41.3	40.4	41.9	48.8	42.4		
3060	39.3	39.9	41.1	39.9	39.7	39.9	48.2	41.1		
3061	39.7	40.8	41.4	40.3	40.1	38.8	48.0	41.3		
3062	38.6	40.6	41.5	40.5	40.6	39.8	48.5	41.4		
3063	40.2	41.3	41.4	40.5	40.4	40.1	48.2	41.7		
3064	39.6	40.3	40.7	39.9	40.1	40.4	47.8	41.3		
3065	40.3	41.3	40.3	40.6	40.1	40.8	46.7	41.4		

TABLE 10.—SUMMARY OF IODINE VALUES
FOR FLAXSEED PRODUCED AT FOUR
LOCATIONS IN THE 1982 REGIONAL TRIALS

VARIETY OR C. I. NO.	BROOKINGS	MORRIS	FARGO	MORRIS
BISON	167	163	175	170
LINOTT	176	174	182	183
CULBERT	187	183	187	187
OUFFERIN	175	177	179	183
2925	171	177	178	184
2932	170	173	177	178
2934	169	176	178	183
2935	177	174	180	185
2938	177	178	181	188
2941	175	178	179	185
2943	175	175	175	187
3051	181	183	184	189
3052	179	185	186	193
3053	175	179	184	189
3054	175	184	183	186
3055	170	170	174	175
3056	179	184	185	186
3057	176	176	182	182
3058	178	179	179	187
3059	174	179	179	191
3060	184	185	185	193
3061	182	185	187	192
3062	184	183	184	192
3063	187	186	188	196
3064	170	174	179	180
3065	164	174	178	179

TABLE 11. — 1982 REGIONAL FLAX TRIAL - RUST EVALUATION

REACTION TO RACE^a

CI	Assumed Parental Rust Genes	371	1	73	191	259	263	358	X3 ^b	X10 ^b	X23 ^b	X36 ^b	22
389	L ₆	S	S	S	S	S	S	S	S	S	S	S	S
2522	L ₆ M	R	R	R	R	R	R	R	S	S	R*	S	S
2776	L ₆ N ₁	R	R	R	S	S	S	S	S	S	R*	S	S
2814	N ₁ P, Raja	R	R	R	R	R	R	R	R	R	R	R	S
2925 ^c	L ₆ M/N ₁ P	R	R	S	-	R	R	R	S	S	S*	S	S
2932	LN ₁ P/L ₆ M	R	R	R*	S	S	S	S	S	S	S	S	S
34	M ₃ P ₃	R	R	R	R	R	R	S	R	R	R	R	S
35	Raja/?	R	R	R	R*	S	S	S	S	S	R*	S	S
38	L ₆ N ₁ /?	R	R	R	S	S	S	S	S	S	S	S	S
2941	L ₆ N ₁ /?	R	R	R	S	S	S	S	S	S	R*	S	S
43	L ₆ N ₁ /?	R	R	R*	R*	S	S	R	R	S	R	S	S
3051	MP Raja/L ₆ N ₁	R	R	R	S	S	S	S	S	S	S	S	S
52	?	R	R	R	S	S	S	S	S	S	R*	S	S
53	L ₆ N ₁ /?	S	R	R	S	S	S	S	R	S	R*	S	S
3054	L ₆ N ₁ /?	R	R	R	S	S	S	S	S	S	R*	S	S
55	L ₆ N ₁ P/L ₁₁	R	R	R	R*	S	S	S	S	S	R*	S	S
56	L ₆ N ₁ /?	R	R	R	S	R	S	S	S	S	S	S	S
57	L ₆ N ₁ /?	R	R	R	S	S	S	S	S	R*	R*	S	S
58	L ₆ M/N ₁ P	R	R	R	S	S	S	S	R*	S	S	S	S
3059	L ₆ N ₁ /?	R	R	R	S	S	S	S	R	S	R*	S	S
60	?	S	R	R	R	S	S	R	R	R*	R*	S	S
61	?	S	R	S	R	S	S	S	R	R*	R*	S	S
62	?	S	R	R	R	S	S	R	R	S	R*	S	S
63	L ₆ N ₁ /Raja N ₁ P	R	R	R	S	S	S	S	S	S	S	S	S
3064	M ₃ P ₃	R	R	R	R	R	R	R	R	R	R	R	S
3065	L ₆ M/N ₁ P	R	R	R	R	S	S	R	R	S	R	S	S

^a Three pots/entry tested for every race, with a total of 75-125 plants.
Reactions = R=resistant, S=susceptible, *=segregation.

^b Crosses 3, 10, 23 and 36 produced by G. D. Statler with virulence patterns as follows:

X3 = hybrid of 20 x 218 is virulent on MM₃PKL₆L₄P₁L₅M₁M₄L₉L₇L₈M₂L₁₁

X10 = hybrid of 218 x 22 is virulent LN₁L₆L₄P₁L₅M₁M₄L₉L₁₀L₇L₈N₂L₃M₂L₁₁

X23 = hybrid 22 x 218 is virulent on LM₃N₁L₆P₁L₅M₁M₄L₉L₇M₂L₁₁N₂M₅P₄

X36 = hybrid of 22 x 28 is virulent on MPN₁L₆P₁L₅M₁M₄L₉L₇L₈M₂L₁₁L₁₀N₂L₁P₄

^c CI 2783, from which CI 2925 is derived, was retested against various rust races and found to be a heterogenous mixture of N₁ P and N₁P, but did not contain P₃

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